

Att #21 6

SEQUENCE LISTING

(1) GENERAL INFORMATION:

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(i) APPLICANT: DeFeo-Jones, Deborah

Feng, Dong-Mei

Garsky, Victor M.

Jones, Raymond E.

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Oliff, Allen I.

(ii) TITLE OF INVENTION: NOVEL PEPTIDES

(iii) NUMBER OF SEQUENCES: 146

15

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: DAVID A. MUTHARD

(B) STREET: 126 E. Lincoln Avenue, P.O. BOX 2000

(C) CITY: RAHWAY

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(D) STATE: NEW JERSEY

(E) COUNTRY: U.S.A.

(F) ZIP: 07065

(v) COMPUTER READABLE FORM:

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(A) MEDIUM TYPE: Floppy disk

(B) COMPUTER: IBM PC compatible

(C) OPERATING SYSTEM: PC-DOS/MS-DOS

(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

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(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:

(B) FILING DATE:

(C) CLASSIFICATION:

35

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Muthard, David A.

(B) REGISTRATION NUMBER: 35,297

(C) REFERENCE/DOCKET NUMBER: 19253IB

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(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (908)594-3903

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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 462 amino acids

50

(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

10 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Met Lys Pro Asn Ile Ile Phe Val Leu Ser Leu Leu Leu Ile Leu Glu
1 5 10 15
Lys Gln Ala Ala Val Met Gly Gln Lys Gly Gly Ser Lys Gly Arg Leu
20 25 30
Pro Ser Glu Phe Ser Gln Phe Pro His Gly Gln Lys Gly Gln His Tyr
25 35 40 45
Ser Gly Gln Lys Gly Lys Gln Gln Thr Glu Ser Lys Gly Ser Phe Ser
50 55 60
Ile Gln Tyr Thr Tyr His Val Asp Ala Asn Asp His Asp Gln Ser Arg
30 65 70 75 80
Lys Ser Gln Gln Tyr Asp Leu Asn Ala Leu His Lys Thr Thr Lys Ser
35 85 90 95
Gln Arg His Leu Gly Gly Ser Gln Gln Leu Leu His Asn Lys Gln Glu
100 105 110
Gly Arg Asp His Asp Lys Ser Lys Gly His Phe His Arg Val Val Ile
40 115 120 125
His His Lys Gly Gly Lys Ala His Arg Gly Thr Gln Asn Pro Ser Gln
130 135 140
Asp Gln Gly Asn Ser Pro Ser Gly Lys Gly Ile Ser Ser Gln Tyr Ser
45 145 150 155 160
Asn Thr Glu Glu Arg Leu Trp Val His Gly Leu Ser Lys Glu Gln Thr

51

	165	170	175
	Ser Val Ser Gly Ala Gln Lys Gly Arg Lys Gln Gly Gly Ser Gln Ser		
5	180	185	190
	Ser Tyr Val Leu Gln Thr Glu Glu Leu Val Ala Asn Lys Gln Gln Arg		
	195	200	205
10	Glu Thr Lys Asn Ser His Gln Asn Lys Gly His Tyr Gln Asn Val Val		
	210	215	220
	Glu Val Arg Glu Glu His Ser Ser Lys Val Gln Thr Ser Leu Cys Pro		
	225	230	235 240
15	Ala His Gln Asp Lys Leu Gln His Gly Ser Lys Asp Ile Phe Ser Thr		
	245	250	255
	Gln Asp Glu Leu Leu Val Tyr Asn Lys Asn Gln His Gln Thr Lys Asn		
20	260	265	270
	Leu Asn Gln Asp Gln Gln His Gly Arg Lys Ala Asn Lys Ile Ser Tyr		
	275	280	285
	Gln Ser Ser Ser Thr Glu Glu Arg Arg Leu His Tyr Gly Glu Asn Gly		
25	290	295	300
	Val Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser Gln Thr Glu Glu		
	305	310	315 320
30	Lys Ala Gln Gly Lys Ser Gln Lys Gln Ile Thr Ile Pro Ser Gln Glu		
	325	330	335
	Gln Glu His Ser Gln Lys Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser		
35	340	345	350
	Thr Glu Glu Arg Arg Leu His Tyr Gly Glu Asn Gly Val Gln Lys Asp		
	355	360	365
	Val Ser Gln Arg Ser Ile Tyr Ser Gln Thr Glu Lys Leu Val Ala Gly		
40	370	375	380
	Lys Ser Gln Ile Gln Ala Pro Asn Pro Lys Gln Glu Pro Trp His Gly		
	385	390	395 400
45	Glu Asn Ala Lys Gly Glu Ser Gly Gln Ser Thr Asn Arg Glu Gln Asp		
	405	410	415
	Leu Leu Ser His Glu Gln Lys Gly Arg His Gln His Gly Ser His Gly		

52.

420 425 430

Gly Leu Asp Ile Val Ile Ile Glu Gln Glu Asp Asp Ser Asp Arg His
435 440 445

5

Leu Ala Gln His Leu Asn Asn Asp Arg Asn Pro Leu Phe Thr
450 455 460

10

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

15

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

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Gly Lys Gly Ile Ser Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
1 5 10 15

(2) INFORMATION FOR SEQ ID NO:3:

35

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

40

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

45

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

57

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5 10

10 (2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

15 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

30 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Arg Ser Ile Tyr Ser
1 5 10 15

Gln Thr Glu

35

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

40 (B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

45

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

54.

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

10 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser
 1 5 10 15

 Gln Thr Glu

15 (2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 25 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

25 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30 (v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

35 Gly Arg Lys Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu Glu
 1 5 10 15

40 Arg Arg Leu His Tyr Gly Glu Asn Gly
 20 25

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

55

- (ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: NO
5 (iv) ANTI-SENSE: NO
(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

15 Ser Tyr Gln Ser Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:8:

- 20 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

25

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

30 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

40 Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:9:

- 45 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

56

- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

10

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:
- 15 Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:10:

- 20 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

25

- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- 30 (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

35

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:
- 40 Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr
 1 5 10

(2) INFORMATION FOR SEQ ID NO:11:

- 45 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

57

- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu

1 5 10

(2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Ala Ser Ala Gly Thr Pro Gly Ala

1 5

40

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

45

58

- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

10

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
- Asn Lys Ile Ser Tyr Gln Ser
- 1 5

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (v) FRAGMENT TYPE: internal

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- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
- Lys Ile Ser Tyr Gln Ser
- 1 5

(2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

45

59.

(ii) MOLECULE TYPE: peptide
 (iii) HYPOTHETICAL: NO
 5 (iv) ANTI-SENSE: NO
 (v) FRAGMENT TYPE: internal
 10 (ix) FEATURE:
 (A) NAME/KEY: Peptide
 (B) LOCATION: 12
 (D) OTHER INFORMATION: /note= "any natural amino acid"
 15
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:
 20 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Xaa Ser Ile Tyr Ser
 1 5 10 15
 Gln Thr Glu
 25 (2) INFORMATION FOR SEQ ID NO:16:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 30 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: peptide
 35 (iii) HYPOTHETICAL: NO
 (iv) ANTI-SENSE: NO
 (v) FRAGMENT TYPE: internal
 40
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:
 45 Asn Lys Ile Ser Tyr Gln Ser Ser
 1 5

60

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- 5 (A) LENGTH: 9 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

15 (v) FRAGMENT TYPE: internal

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Asn Lys Ile Ser Tyr Gln Ser Ser Ser
1 5

25 (2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- 30 (A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

35 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

40 (v) FRAGMENT TYPE: internal

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser
1 5 10

61

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- 5 (A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

15 (v) FRAGMENT TYPE: internal

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5 10

25 (2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- 30 (A) LENGTH: 17 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

35 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

40 (v) FRAGMENT TYPE: internal

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Gln Leu Asp Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr His Gln Ser
1 5 10 15

(62)

Ser

(2) INFORMATION FOR SEQ ID NO:21:

5

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

25

Asn Arg Ile Ser Tyr Gln Ser
1 5

(2) INFORMATION FOR SEQ ID NO:22:

30

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

63

Asn Lys Val Ser Tyr Gln Ser
1 5

(2) INFORMATION FOR SEQ ID NO:23:

5

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

25

Asn Lys Met Ser Tyr Gln Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:24:

30

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

64

Asn Lys Leu Ser Tyr Gln Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:25:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 9 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

25

Asn Lys Ile Thr Tyr Gln Ser Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:26:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 9 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

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(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

65

Asn Lys Ile Ser Phe Gln Ser Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:27:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

25

Asn Lys Ile Ser Trp Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:28:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

35

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

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(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

66

Asn Lys Ile Ser Tyr Asn Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:29:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

25

Asn Lys Ile Ser Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:30:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Asn Lys Ile Ser Tyr Gln Ser
1 5

(2) INFORMATION FOR SEQ ID NO:31:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

25

Gln Lys Ile Ser Tyr Gln Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:32:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 9 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

68

Asn Arg Ile Thr Tyr Gln Ser Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:33:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

25

Asn Arg Ile Ser Phe Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:34:

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(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

69

Gln Lys Ile Ser Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:35:

- 5 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
10 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO
15 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

25 Asn Arg Ile Ser Trp Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:36:

- 30 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
35 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO
40 (v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

70

Asn Arg Ile Ser Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:37:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

25

Asn Lys Ile Thr Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:38:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

7/

Asn Lys Leu Ser Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:39:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

25

Gln Lys Leu Ser Tyr Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:40:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

MJ.

Asn Arg Leu Ser Tyr Gln Thr Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:41:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

25

Asn Lys Val Ser Phe Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:42:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

173

Asn Arg Val Ser Trp Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:43:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

25

Gln Lys Val Ser Tyr Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:44:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

35

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:45:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

25

Gly Glu Gln Gly Val Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser
1 5 10 15

Gln Thr Glu

30

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 amino acids

35

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

40

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45

(v) FRAGMENT TYPE: internal

75

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

5 Gly Lys Gly Ile Ser Ser Gln Tyr Ser Asn Thr Asp Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:47:

10 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

30 Gly Glu Asn Gly Leu Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser
 1 5 10 15
 Gln Thr Glu

(2) INFORMATION FOR SEQ ID NO:48:

35

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- 40 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

45

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

76

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

Gly Glu Asn Gly Val Asn Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser
1 5 10 15

10 Gln Thr Glu

(2) INFORMATION FOR SEQ ID NO:49:

15 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

20

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

Gly Glu Asn Gly Val Gln Arg Asp Val Ser Gln Arg Ser Ile Tyr Ser
35 1 5 10 15

Gln Thr Glu

40 (2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

45 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

5 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Lys Ser Ile Tyr Ser
1 5 10 15

15

Gln Thr Glu

(2) INFORMATION FOR SEQ ID NO:51:

20

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

25

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

30

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

40 Gly Glu Asn Gly Val Gln Lys Asp Leu Ser Gln Thr Ser Ile Tyr Ser
1 5 10 15

Gln Thr Glu

45

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:

78

(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

10

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

20 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Ser Ser Ile Phe Ser
 1 5 10 15

Gln Thr Glu

25 (2) INFORMATION FOR SEQ ID NO:53:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

30

(ii) MOLECULE TYPE: peptide

35

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

45

Gly Glu Asn Gly Val Gln Lys Asp Met Ser Gln Ser Ser Ile Tyr Thr
1 5 10 15

79

Gln Thr Glu

(2) INFORMATION FOR SEQ ID NO:54:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

10

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

25

Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Arg Ser Ile Tyr Thr
1 5 10 15

Gln Thr Glu

30

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

35

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

40

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45

(v) FRAGMENT TYPE: internal

SC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

5 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser
 1 5 10 15
 Gln Ser Glu

10 (2) INFORMATION FOR SEQ ID NO:56:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19 amino acids
 (B) TYPE: amino acid
15 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

25 (v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

30 Gly Glu Asn Gly Val Gln Lys Asp Val Ser Gln Arg Ser Ile Tyr Ser
 1 5 10 15
 Asn Thr Glu

35

(2) INFORMATION FOR SEQ ID NO:57:

- (i) SEQUENCE CHARACTERISTICS:
40 (A) LENGTH: 15 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

81

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

10 Gly Lys Ala Ile Ser Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:58:

15 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

20

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

35 Gly Lys Gly Ile Ser Ser Gln Tyr Ser Asn Ser Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:59:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

10 Gly Arg Gly Ile Ser Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:60:

15 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

20

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

35 Gly Lys Gly Ile Thr Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:61:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

10 Gly Lys Gly Ile Ser Thr Gln Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:62:

15 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

20

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

25

 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

35 Gly Lys Gly Ile Ser Ser Asn Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:63:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

84.

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

10 Ala Lys Gly Ile Ser Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:64:

15 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

20

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

35 Gly Lys Gly Ile Ser Ser Gln Phe Ser Asn Thr Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:65:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

85

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

10 Gly Lys Gly Ile Ser Ser Gln Tyr Thr Asn Ser Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:66:

15 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 15 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

20

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

35 Gly Lys Gly Ile Ser Ser Gln Tyr Ser Asn Ser Glu Glu Arg Leu
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:67:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 25 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

86

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

10 Ser Gln Lys Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu Glu
 1 5 10 15

 Arg Arg Leu His Tyr Gly Glu Asn Gly
 20 25

15

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

25

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30 (v) FRAGMENT TYPE: internal

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

 Ile Ser Tyr Gln Ser Ser Ser Thr
 1 5

40 (2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 9 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

87

(iii) HYPOTHETICAL: NO

5

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser
1 5

15

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

20

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

25

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Leu
1 5 10

40

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

45

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide



(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

5

(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

Ala Asn Gly Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5 10

15

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

20

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

25

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Ala Asn Pro Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5 10

40

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

45

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

89

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

5

(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

Ala Asn Lys Ile Ser Tyr Gln Ser Ala Ser Thr Glu
1 5 10

15

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

20

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

25

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Lys Thr Glu
1 5 10

40

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

45

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

90

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

5

(v) FRAGMENT TYPE: internal

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Thr Glu
1 5 10

15

(2) INFORMATION FOR SEQ ID NO:76:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

20

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

25

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

30

(v) FRAGMENT TYPE: internal

(ix) FEATURE:

(A) NAME/KEY: Peptide

35

(B) LOCATION: 5

(D) OTHER INFORMATION: /label= d-serine
/note= "unnatural configuration of the amino acid"

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
1 5 10

45

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

91.

(A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

5

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

10 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

15 (ix) FEATURE:

(A) NAME/KEY: Peptide

(B) LOCATION: 4

(D) OTHER INFORMATION: /label= d-isoleucine
 /note= "unnatural amino acid stereochemical configuration"

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu

25 1 5 10

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:

30 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

40 (v) FRAGMENT TYPE: internal

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Gln Thr Glu

92:

1 5 10

(2) INFORMATION FOR SEQ ID NO:79:

- 5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

- 10 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

- 15 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

25 Ala Asn Lys Ile Ser Tyr Gln Ser Ala Lys Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:80:

- 30 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

- 35 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

- 40 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

- 45 (ix) FEATURE:

(A) NAME/KEY: Peptide
(B) LOCATION: 3
(D) OTHER INFORMATION: /label= d-lysine
/note= "unnatural amino acid stereochemical configuration"

93

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

5 Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:81:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

30 Ala Asn Lys Ile Ser Tyr Gln Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:82:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

94

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

5 Ala Asn Lys Ser Tyr Gln Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:83:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

30 Ala Asn Lys Ile Tyr Gln Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:84:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

95

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

5 Ala Asn Lys Ala Ser Tyr Gln Ser Ala Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:85:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

30 Ala Asn Glu Ile Ser Tyr Gln Ser Ala Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:86:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

96

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

5 Lys Ile Ser Tyr Gln Ser Ser
 1 5

(2) INFORMATION FOR SEQ ID NO:87:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

30 Ser Tyr Gln Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:88:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

97

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

5 Ser Tyr Gln Ser Ser Thr Leu
 1 5

(2) INFORMATION FOR SEQ ID NO:89:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

30 Ala Ser Tyr Gln Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:90:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

98

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

5 Glu Ile Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:91:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

30 Ala Asn Glu Ile Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:92:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

99

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

5 Ala Asn Lys Ile Ser Tyr Tyr Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:93:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

30 Ala Asn Lys Ile Ser Tyr Tyr Ser Ala Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:94:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

106

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

5 Ala Ser Tyr Gln Ser Ser Leu
 1 5

(2) INFORMATION FOR SEQ ID NO:95:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

30 Ala Asn Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:96:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 9 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

101

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

5 Ala Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:97:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

30 Ser Tyr Gln Ser Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:98:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

102

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

5 Ala Asn Lys Ala Ser Tyr Gln Ser Ala Ser Cys
 1 5 10

(2) INFORMATION FOR SEQ ID NO:99:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 5 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

30 Gln Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:100:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 6 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

103

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

5 Tyr Gln Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:101:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 6 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

30 Ser Gln Ser Ser Thr Glu
 1 5

(2) INFORMATION FOR SEQ ID NO:102:

35 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

45 (v) FRAGMENT TYPE: internal

104

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

5 Ala Asn Lys Ile Ser Gln Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:103:

10 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 11 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

15

 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25 (ix) FEATURE:

 (A) NAME/KEY: Peptide

 (B) LOCATION: 3

 (D) OTHER INFORMATION: /label= unnatural
 /note= "ornithine"

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

35 Ala Asn Xaa Ile Ser Tyr Gln Ser Ser Thr Glu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:104:

40 (i) SEQUENCE CHARACTERISTICS:

 (A) LENGTH: 7 amino acids

 (B) TYPE: amino acid

 (C) STRANDEDNESS: single

 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

105

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(ix) FEATURE:

(A) NAME/KEY: Peptide

(B) LOCATION: 2

10 (D) OTHER INFORMATION: /label= unnatural
/note= "3,4-dichlorophenalanine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

15 Ser Xaa Gln Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:105:

20 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

25

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

30 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

35 (ix) FEATURE:

(A) NAME/KEY: Peptide

(B) LOCATION: 2

(D) OTHER INFORMATION: /label= unnatural
40 /note= "(3-pyridinyl)alanine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

45 Ser Xaa Gln Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:106:

106

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
5 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

20 Ser Lys Gln Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:107:

25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

30

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

35 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

45 Ser Tyr Gln Ser Ser Ser Leu
1 5

(2) INFORMATION FOR SEQ ID NO:108:

107

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 5 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

15 (ix) FEATURE:
 (A) NAME/KEY: Peptide
 (B) LOCATION: 1
 (D) OTHER INFORMATION: /label= unnatural
 20 /note= "epsilon aminocaproic acid"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

25 Xaa Tyr Gln Ser Ser Ser Leu
 1 5

(2) INFORMATION FOR SEQ ID NO:109:

30 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 35 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45 (ix) FEATURE:
 (A) NAME/KEY: Peptide
 (B) LOCATION: 4
 (D) OTHER INFORMATION: /label= unnatural

/note= "N-methylisoleucine"

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

Ala Asn Lys Xaa Ser Tyr Gln Ser Ser Thr Glu
1 5 10

10 (2) INFORMATION FOR SEQ ID NO:110:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

15 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

30 Ser Tyr Gln Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:111:

35 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

40

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

45 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

109.

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

Tyr Gln Ser Ser Thr Glu
1 5

10 (2) INFORMATION FOR SEQ ID NO:112:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

15 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

30 Ser Tyr Lys Ser Ser Thr Glu
1 5

(2) INFORMATION FOR SEQ ID NO:113:

35 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

40 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

45 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

110

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:
Ser Tyr Tyr Ser Ser Thr Glu
1 5

10 (2) INFORMATION FOR SEQ ID NO:114:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
15 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:

30 Ser Tyr Gln Ser Ser Leu
1 5

(2) INFORMATION FOR SEQ ID NO:115:

35 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

40

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

45 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

|||

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:115:

Ser Tyr Gln Ser Ser Leu
1 5

10 (2) INFORMATION FOR SEQ ID NO:116:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

20

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

25

(ix) FEATURE:

- (A) NAME/KEY: Peptide
 - (B) LOCATION: 1
 - (D) OTHER INFORMATION: /label= unnatural
- /note= "2,3-diaminopropionic acid"

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:116:

35 Xaa Tyr Gln Ser Ser Ser Leu
1 5

(2) INFORMATION FOR SEQ ID NO:117:

40 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

45

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

112

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:117:

10

Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:118:

15

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

20

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

25

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:118:

35

Ala Asn Lys Ala Ser Tyr Gln Ser Ala Ser Thr Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO:119:

40

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

45

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

113.

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:

10

Ala Asn Lys Ala Ser Tyr Gln Ser Ala Ser Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO:120:

15

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

20

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

25

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:120:

35

Ala Asn Lys Ala Ser Tyr Gln Ser Ser Ser Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO:121:

40

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

45

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

114.

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:121:

10 Ala Asn Lys Ala Ser Tyr Gln Ser Ser Leu
 1 5 10

(2) INFORMATION FOR SEQ ID NO:122:

15 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
20 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

25 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

30 (ix) FEATURE:
 (A) NAME/KEY: Peptide
 (B) LOCATION: 7
 (D) OTHER INFORMATION: /label= d-leucine
35 /note= "unnatural amino acid stereochemical configuration"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:122:

40 Ser Tyr Gln Ser Ser Thr Leu
 1 5

(2) INFORMATION FOR SEQ ID NO:123:

45 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single

115

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

5 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

10 (v) FRAGMENT TYPE: internal

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:123:

Ala Asn Lys Ala Ser Tyr Ala Ser Ser Ser Leu
1 5 10

20 (2) INFORMATION FOR SEQ ID NO:124:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

25 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

30 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:124:

40 Lys Tyr Gln Ser Ser Ser Leu
1 5

(2) INFORMATION FOR SEQ ID NO:125:

45 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

116

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

5 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

10 (v) FRAGMENT TYPE: internal

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:125:

Ser Tyr Gln Ser Ser Lys Leu
1 5

20 (2) INFORMATION FOR SEQ ID NO:126:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7 amino acids

(B) TYPE: amino acid

25 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

30 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

35 (ix) FEATURE:

(A) NAME/KEY: Peptide

(B) LOCATION: 7

40 (D) OTHER INFORMATION: /label= d-leucine
/note= "unnatural amino acid stereochemical configuration"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:126:

45 Ser Tyr Gln Ser Ser Lys Leu
1 5

(2) INFORMATION FOR SEQ ID NO:127:

117

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:127:

20 Asn Lys Ile Ser Tyr Tyr Ser
1 5

(2) INFORMATION FOR SEQ ID NO:128:
25

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO
35

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:128:

45 Asn Lys Ala Ser Tyr Gln Ser
1 5

(2) INFORMATION FOR SEQ ID NO:129:

118

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:129:

Ser Tyr Gln Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:130:

25

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

35

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:130:

45 Asn Lys Ile Ser Tyr Gln Ser Ala
1 5

(2) INFORMATION FOR SEQ ID NO:131:

119

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:131:

20 Ala Asn Lys Ile Ser Tyr Tyr Ser
1 5

(2) INFORMATION FOR SEQ ID NO:132:
25

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO
35

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:132:

45 Ala Asn Lys Ala Ser Tyr Gln Ser
1 5

(2) INFORMATION FOR SEQ ID NO:133:

120

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:133:

20 Ser Tyr Gln Ser Ser Thr
1 5

(2) INFORMATION FOR SEQ ID NO:134:
25

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO
35

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:134:

45 Ser Tyr Gln Ser Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:135:

121

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:135:

Ser Tyr Gln Ser Ser Leu
1 5

(2) INFORMATION FOR SEQ ID NO:136:

25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

35 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:136:

45 Ala Asn Lys Ile Ser Tyr Gln Ser Ala
1 5

(2) INFORMATION FOR SEQ ID NO:137:

162

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9 amino acids
(B) TYPE: amino acid
5 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:137:

20 Ala Asn Lys Ile Ser Tyr Tyr Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:138:
25

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO
35

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal
40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:138:

45 Ala Asn Lys Ile Ser Tyr Tyr Ser Ala
1 5

(2) INFORMATION FOR SEQ ID NO:139:



(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 9 amino acids
 (B) TYPE: amino acid
5 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

15 (v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:139:

20 Ala Asn Lys Ala Ser Tyr Gln Ser Ala
 1 5

(2) INFORMATION FOR SEQ ID NO:140:

25 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 5 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

35 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:140:

45 Lys Tyr Gln Ser Ser
 1 5

(2) INFORMATION FOR SEQ ID NO:141:

134

(i) SEQUENCE CHARACTERISTICS:
5 (A) LENGTH: 5 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

10 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

15 (v) FRAGMENT TYPE: internal

(ix) FEATURE:
(A) NAME/KEY: Peptide
(B) LOCATION: 1
20 (D) OTHER INFORMATION: /label= homoarginine

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:141:

25 Xaa Tyr Gln Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:142:

30 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
35 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

40 (iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:142:

125

Lys Tyr Gln Ser Ser Ser
1 5

(2) INFORMATION FOR SEQ ID NO:143:

5

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

15

(iv) ANTI-SENSE: NO

(v) FRAGMENT TYPE: internal

20

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1
- (D) OTHER INFORMATION: /label= homoarginine

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:143:

Xaa Tyr Gln Ser Ser Ser
1 5

30

(2) INFORMATION FOR SEQ ID NO:144:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45

(v) FRAGMENT TYPE: internal

126

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:144:

5 Ser Tyr Gln Ser Ser Ser Leu
 1 5

(2) INFORMATION FOR SEQ ID NO:145:

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

20 (iv) ANTI-SENSE: NO

 (v) FRAGMENT TYPE: internal

25 (ix) FEATURE:

 (A) NAME/KEY: Peptide

 (B) LOCATION: 1

 (D) OTHER INFORMATION: /label= homoarginine

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:145:

 Xaa Tyr Gln Ser Ser Ser Leu
 1 5

35

(2) INFORMATION FOR SEQ ID NO:146:

40 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: peptide

 (iii) HYPOTHETICAL: NO

 (iv) ANTI-SENSE: NO

124

(v) FRAGMENT TYPE: internal

- 5 (ix) FEATURE:
 (A) NAME/KEY: Peptide
 (B) LOCATION: 7
 (D) OTHER INFORMATION: /label= norleucine

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:146:

Lys Tyr Gln Ser Ser Ser Leu
1 5

138